

MAKING AND USING A REED FENCE TO HARVEST FISH



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The use of harvesting gear such as a reed fence, which is made from locally available construction materials could avert the problem of overdependence of fish farmers on the Malawi Fisheries Department for seine nets to harvest fish from undrainable ponds.

Making a reed fence

A reed fence is made from bamboo poles of local type which are not hollowed. Forty pieces of bamboo are required to construct a fence of about 15 metres long.



Each bamboo is cut to pieces of about 1 metre high.



The piece of bamboo is split into halves, then quarters or even eighths depending on the thickness of the bamboo pole.



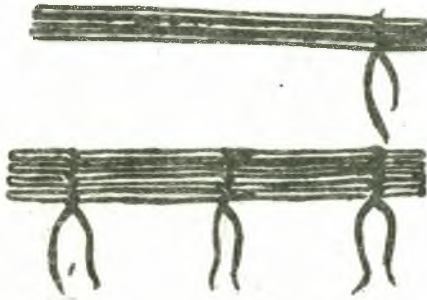
Each quarter or eighth is smoothed by a sharp knife to be made into a round smooth stick of the size of a thumb. Approximately 1,200 sticks are required for a fence of about 15 m long. Rope is obtained from the fibres of locally available trees and brought to the construction site of the reed fence.

Two ropes are used concurrently to tie sticks together. One line is made to the end of the fence. Thereafter, two other lines are made across the fence.



The fence is made and rolled together.

Using a reed fence



Unfold the fence either on the dikes or in the pond to cover the width of the pond.



When the fence is in water make sure it is in a semicircular position to improve efficiency. The distance between individuals operating should be around 1 metre. The operation is started by moving the fence slowly to the other end. Apart from operators at the edges, all others use their feet to drag the fence through the mud, and lift it reasonably up to prevent escape of fish through space below, at the same time preventing it from being stuck in the mud.



At the approach of the other side of the pond, operators at the edges start enclosing the fence slowly, until the two meet to form a circle.



At the meeting point, one of the operators take both sides and start rolling the two sides together while reducing the circle.



The circle is reduced to where scooping fish from the fence is easy. Too large a circle will not allow a scoop net to capture anything.



Advantages of a reed fence

- Unlike fish traps, hook-and-line, and cast nets it can harvest enough fish biomass for sale within 30 minutes.
- It has potential to be improved by farmers in construction and operation techniques to improve its efficiency.
- It could be used for selective fishing or partial harvesting.
- It is made from locally available materials hence low capital costs. A fence of about 15 m may cost about K66.00, but the cost may be virtually nothing should a farmer own a bamboo plantation and labour. A seine net of the same size costs K195.00 (1991 Malawi kwacha value).

Disadvantages of a reed fence

- It requires many people to operate. A 15m fence requires 8 people to operate.
- Its efficiency at catching fish depends on the type of species in the pond. It catches about 50 percent of *Tilapia rendalli* and about 30 percent of *Oreochromis shiranus* in 5 hauls.
- It is difficult to operate the fence where the pond base is very muddy.
- It may catch less fish where the pond base is irregular or has holes.
- It cannot be relied upon for complete harvesting of fish in undrainable ponds.

Advising farmers on the type and technique to use for harvesting fish

There are two known ways of harvesting fish from ponds: **intermittent** and **batch**.

Intermittent harvesting

Also called partial harvesting, this can be defined as the removal of fish at different times during a single production cycle.

Batch harvesting

This is the removal of fish at the end of a production cycle.

Important aspects

There are three important aspects in small scale fish farming: the objective of the farmer for raising fish, the type of harvesting and the harvesting technique.

- The objective of the farmer dictates the type of harvesting which, in turn, determines the harvesting technique. For example, a farmer raising fish for food is likely to practise intermittent harvesting and is more likely to use the hook-and-line technique than the seine net.
- The cost of the gear also influences the type of harvesting technique.
- The extensionist should be fully aware of the stated facts in advising farmers on which harvesting technique to use.
- The advantages and disadvantages of various techniques are stated in other sections of this information kit.

